

REMARKS

Summary of the Office Action

Claims 7-14 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Anstrom et al. (US 6,407,341) in view of Iijima et al. (US 2003/0011070) and Mashino (US 6,507,497).

An Interview Summary was provided regarding a telephone conversation on October 26, 2006.

Summary of the Response to the Office Action

Applicants have amended claim 7 to further define the invention. Accordingly, claims 7-14 are currently pending.

Interview Summary

Applicants wish to summarize the events that lead to the issuance of the Interview Summary dated October 26, 2006. Applicants respectfully assert that the Examiner, at no time, proposed any amendments. Specifically, the Examiner actually placed the burden of drafting proposed claim amendments upon Applicants' representative. Accordingly, Applicants' representative drafted a Proposed Claim Amendment and a Proposed Abstract of the Disclosure and forwarded them to the Examiner via facsimile transmission on October 27, 2006, for his consideration. Copies of the faxed proposals are provided herewith.

As directed on the facsimile cover sheet, Applicants' representative indicated that "we **cannot** authorize an Examiner's Amendment to enter these amendments to claim 7." Specifically, since Applicants' representative was required by the Examiner to draft proposed amendments for the Examiner's consideration, he could not contact the inventors for their

permission to have the Examiner's Amendment entered by the Examiner until it was first determined that the proposed amendments were acceptable to the Examiner. Thus, during a subsequent telephone conversation after the Examiner received the facsimile, the Examiner indicated that since the facsimile cover sheet dated October 27, 2006 indicated that entry of the proposed amendments by an Examiner's Amendment is not authorized, a Final Office Action would be forthcoming. Of course, it was explained to the Examiner that Applicants' representative had not had the opportunity to contact the inventors to receive their authorization for entry of the proposed amendments since the amendments had to first be acceptable to the Examiner.

During the telephone conversation on October 26, 2006, the Examiner pointed out Kresege et al. (US 6,249,045), and requested Applicants' representative to "look over" Kresege et al. since the Examiner believed that Kresege et al. could be used to reject at least independent claim 7. However, the Final Office Action does not apply Kresege et al. against the pending claims, but now cites Mashino (US 6,507,497) against all pending claims.

During the telephone conversation on October 26, 2006, the Examiner pointed out that the Abstract was too long, and that a new Abstract would be required. However, in the Final Office Action no objection to the Abstract has been made. Accordingly, although Applicants' representative earlier proposed an amended Abstract, the present Amendment does not amend the Abstract.

For at least the above explanation, Applicants respectfully assert that the Interview Summary dated October 26, 2006 is not factually correct and does not accurately reflect the actual events that transpired on October 26, 2006 and October 27, 2006.

All Claims Define Allowable Subject Matter

Claims 7-14 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Anstrom et al. (US 6,407,341) in view of Iijima et al. (US 2003/0011070) and Mashino (US 6,507,497).

Applicants respectfully traverse these rejections on grounds that the applied references, whether taken singly or combined, fail to teach or suggest the combination of features recited by amended independent claim 7, and hence dependent claims 8-14.

Independent claim 7, as amended, recites a package substrate including, in part, “wire bonding pads formed on predetermined portions of the plated pattern layer to contact the second copper plated layer and contact an upper surface of the base substrate where portions of the first copper plated layer have been removed, the wire bonding pads including Au and not connected to a remnant of a plating lead line,” and “solder ball pads formed on predetermined portions of the plated pattern layer at a lower surface of the base substrate where portions of the first copper plated layer have been removed, the solder ball pads including Au and not connected to a remnant of a plating lead line.” Unlike the references cited, the present invention carries out electrolytical Au plating on wire bonding pads and solder ball pads without using plating lead lines. The present invention accomplishes this by using a first copper plated layer 33 as a plating lead line.

In direct contrast to Applicants’ claimed invention, Anstrom et al., merely teaches a generally known nonelectrolytical plating method. Specifically, in Anstrom et al. the microvias 124, 126, 128, 134, 136, and 138 are formed by laser drilling into the dielectric sheet 122. A seeded layer is formed on the signal layer 120, then nonelectrolytical plating such as copper is

carried out on the surface of the seeded layer. In other words, the plated layers 125, 127, and 129 are copper plated by using a nonelectrolytical plating layer formed on the surface of the seeded layer. Anstrom et al., col. 10, lines 52-67.

Further, as shown in Figs. 5 and 6 of the present application, a first copper plated layer 33 is formed to cover the entire surfaces of the base substrate 31 and the via hole. On the other hand, Anstrom et al. teaches that layer 66 is formed only on some part of the substrate.

The other cited references, Iijima et al. and Mashino do not overcome these deficiencies of Anstrom et al. Accordingly, Applicants respectfully assert that the rejection under 35 U.S.C. §103(a) should be withdrawn because the applied art does not teach or suggest the novel combination of features recited in independent claim 7, and hence dependent claims 8-14.

CONCLUSION

In view of the foregoing, withdrawal of the rejections and allowance of the pending claims are earnestly solicited. Should there remain any questions or comments regarding this response or the application in general, the Examiner is urged to contact the undersigned at the number listed below.

If there are any other fees due in connection with the filing of this response, please charge the fees to our Deposit Account No. 50-0310. If a fee is required for an extension of time under 37 C.F.R. § 1.136 not accounted for above, such extension is requested and the fee should also be charged to our Deposit Account.

Respectfully submitted,

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